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EXAMINER

PAN, JOSEPH T

ART UNIT	PAPER NUMBER
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2135

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/806,020

Applicant(s)

BIRRELL ET AL.

Examiner

Joseph Pan

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/21/05&3/22/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Juels et al. (U.S. Patent No. 7,197,639 B1), hereinafter “Juels”.

Referring to claim 12:

Juels teaches:

A puzzle checker for verifying solutions to cryptographic puzzles; the puzzles associated with identifiers and timestamps, for use in a digital delivery system comprising an intended recipient of a digital object including a cryptographic puzzle and solution, the puzzle checker in connection with at least one cancellation server, and executing the steps of:

transmitting the identifier associated with the puzzle to the at least one cancellation server (see figure 2, element 270 ‘communicate verification of the correct results of the task’; column 7, line 59 – column 8, line 26; and column 17, lines 59-65, of Juels); and

processing the digital object if a REJECT response is received from the at

least one cancellation server (see figure 5, element 285 'reject verification of the correct results of the task', of Juels).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11, 13-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juels et al. (U.S. Patent No. 7,197,639 B1) in view of Landsman et al. (U.S. Pub. No. 2005/0055410 A1), hereinafter "Landsman".

Referring to claims 1, 28, 36:

i. Juels teaches:

A cancellation server for canceling cryptographic puzzles, the puzzles associated with identifiers, for use in a digital delivery system comprising an intended recipient of a digital object including a cryptographic puzzle (see e.g. figure 2 of Juels), the cancellation server executing the steps of:

receiving the identifier associated with the recipient's puzzle (see figure 2, element 270 'communicate verification of the correct results of the task'; column 7, line 59 – column 8, line 26; and column 17, lines 59-65, of Juels); and

processing the recipient's puzzle (see figure 2, element 280 'validate verification of the correct results of the task'; and column 7, line 59 – column 8, line 26, of Juels).

However, Juels does not specifically mention the database.

ii. Landsman teaches a method of managing electronic messages wherein Landsman discloses the database (see page 4, paragraph [0042] of Landsman).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Landsman into the method of Juels to couple the cancellation server to a database.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Landsman into the system of Juels to couple the cancellation server to a database, because it's well known in the art that the database can store and keep track of information. Therefore Landsman's teaching could enhance Juels's system.

Referring to claims 2-3:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose transmitting a response (see e.g. figure 5, element 295 'communicate negative response allocation acknowledgment' of Juels).

Referring to claims 4, 29:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the timestamp (see figure 8, element 510 'time stamp' of Juels).

Referring to claims 5, 30:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the range of values (see column 11, lines 46-57 of Juels).

Referring to claims 6, 34:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the hashing (see column 3, lines 12-16 of Juels).

Referring to claim 7:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the distributing (see column 9, lines 20-24 of Juels).

Referring to claims 8, 31:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the second server (see column 3, lines 54-62 of Juels).

Referring to claims 9, 32:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the database (see page 4, paragraph [0042], lines 3-8 of Landsman).

Referring to claims 10, 33:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the network (see column 2, lines 30 of Juels).

Referring to claims 11, 35:

Juels and Landsman teach the claimed subject matter: a cancellation server for canceling cryptographic puzzles (see claim 1 above). They further disclose the email (see column 1, lines 39-47 of Juels).

Referring to claim 13:

- i. Juels teaches the claimed subject matter:

A puzzle checker for verifying solutions to cryptographic puzzles (see claim 12 above). However, Juels does not specifically mention removing the object.

- ii. Landsman teaches a method of managing electronic messages wherein Landsman discloses the removing an object (see page 1, paragraph [0016], lines 8-10 of Landsman).

- iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Landsman into the method of Juels to add the feature of removing an object.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Landsman into the system of Juels to add the feature of removing an object, because when the server rejects verification of the correct results of the task and communicate negative resource allocation acknowledgement to the client (see figure 5, elements 285, 295 of Juels), the original client's request (see figure 5, element 230 'communicate resource allocation request' of Juels) need to be removed from the server.

Referring to claim 14:

Juels and Landsman teach the claimed subject matter: a puzzle checker for verifying solutions to cryptographic puzzles (see claim 13 above). They further disclose the filtering (see page 1, paragraph [0010] of Landsman).

Referring to claim 15:

Juels and Landsman teach the claimed subject matter: a puzzle checker for verifying solutions to cryptographic puzzles (see claim 13 above). They further disclose the modification (see column 22, lines 8-11 Juels).

Referring to claim 16:

Juels and Landsman teach the claimed subject matter: a puzzle checker for verifying solutions to cryptographic puzzles (see claim 13 above). They further disclose verifying whether the solution solves the puzzle, and processing the object (see figure 2, elements 280 'validate verification of the correct results of the task', 290 'allocate resource and communicate resource allocation acknowledgment', of Juels).

Referring to claim 17:

Juels and Landsman teach the claimed subject matter: a puzzle checker for verifying solutions to cryptographic puzzles (see claim 13 above). They further disclose the timestamp (see figure 8, element 510 'time stamp' of Juels).

Referring to claim 18:

Juels and Landsman teach the claimed subject matter: a puzzle checker for verifying solutions to cryptographic puzzles (see claim 13 above). They further disclose the hashing (see column 3, lines 12-16 of Juels).

Referring to claims 19-20:

Juels and Landsman teach the claimed subject matter: a puzzle checker for verifying solutions to cryptographic puzzles (see claim 13 above). They further disclose the recipient and the server (see figure 2, element 110 'client', 120 'server', of Juels).

Referring to claim 21:

Juels and Landsman teach the claimed subject matter: a puzzle checker for verifying solutions to cryptographic puzzles (see claim 13 above). They further disclose the reject (see figure 5, element 285 'reject verification of the correct results of the task' of Juels).

Referring to claim 22:

i. Juels teaches:

A puzzle creator for generating and solving cryptographic puzzles for use in a digital delivery system comprising a puzzle checker in connection with at least one cancellation server and an intended recipient of a digital object including a cryptographic puzzle and solution, the puzzle creator executing the steps of:

generating an identifier (see figure 8, element 530 'other data' of Juels);

generating a timestamp (see figure 8, element 510 'time stamp' of Juels);

generating a cryptographic puzzle using the identifier and timestamp (see figure 8, elements 540 'input crypto function', 560 'output crypto function' of Juels); and

computing a solution to the cryptographic puzzle (see column 17, line 59-column 18, line 7 of Juels).

However, Juels does not specifically mention attaching the puzzle, solution, timestamp and identifier to the object.

ii. Landsman teaches a method of managing electronic messages wherein Landsman discloses attaching the authentication certificate to an electronic message (see page 2, paragraph [0020], lines 1-5 of Landsman).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Landsman into the method of Juels to attach the puzzle, solution, timestamp and identifier to the object.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Landsman into the system of Juels to attach the puzzle, solution, timestamp and identifier to an object, because the client and server communicate with each other during the session (see e.g. figure 4), it's well known in the art to piggyback [i.e., attach] the puzzle, solution, timestamp and identifier to an object, such as a response from the server to the client.

Referring to claims 23-24:

Juels and Landsman teach the claimed subject matter: a puzzle creator for generating and solving cryptographic puzzles (see claim 22 above). They further disclose the string (see figure 7, element 700 'k-bit substring' of Juels).

Referring to claim 25:

Juels and Landsman teach the claimed subject matter: a puzzle creator for generating and solving cryptographic puzzles (see claim 22 above). They further disclose the computing (see figure 7, element 560 'output crypto function' of Juels).

Referring to claim 26:

Juels and Landsman teach the claimed subject matter: a puzzle creator for generating and solving cryptographic puzzles (see claim 22 above). They further disclose receiving a request and transmitting the identifier, timestamp, puzzle and solution to the sender (see figure 2, element 230 'communicate resource allocation request', element 240 'communicate computation intensive task' of Juels).

Referring to claim 27:

Juels and Landsman teach the claimed subject matter: a puzzle creator for generating and solving cryptographic puzzles (see claim 22 above). They further disclose receiving from the sender (see figure 2, element 240 'communicate computation intensive task' of Juels).

Conclusion


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Pan whose telephone number is 571-272-5987.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Joseph Pan
May 22, 2007


KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100